

CONTENTS VOLUME 29

Explicit semi-direct methods based on approximate inverse matrix techniques for solving boundary-value problems on parallel processors, <i>E.A. Lipitakis and D.J. Evans (Greece / United Kingdom)</i>	1
Simulation and modeling of a single bus tightly coupled multiprocessor system, <i>M. Witten, B.L. Bodnar and A.C. Liu (U.S.A.)</i>	19
Determination of invariant tori bifurcation points, <i>M. Holodniok and M. Kubiček (Czechoslovakia)</i>	33
Pattern search for optimization, <i>N.V. Findler, C. Lo and R. Lo (U.S.A.)</i>	41
A finite element method for computing sound propagation in ducts, <i>D.W. Quinn (U.S.A.)</i>	51
News of IMACS	65
A modelling spectrum for carbon cycle studies, <i>I.G. Enting (Australia)</i>	75
A principle for construction of one-step integration methods with maximum imaginary stability limits, <i>I.P.E. Kinnmark (U.S.A.)</i>	87
Modeling of lightning, <i>D.W. Quinn (U.S.A.)</i>	107
Vibration in offshore structures: An analysis for the general nonlinear stochastic case - Part I, <i>G. Adomian (U.S.A.)</i>	119
Minimization of the delay in a data-communication network with centralized control under uncertainty, <i>J. Kreimer (Israel)</i>	123
Tricks and treats: Nonlinear operations in digital simulation, <i>G.A. Korn (U.S.A.)</i>	129
Book Reviews, <i>W.F. Ames and C. Brezinski (U.S.A. / France)</i>	145
News of IMACS	151

Special Issue on Stochastic Systems Modelling

Introduction, <i>R. Riganti (Italy)</i>	167
Measurement, information and uncertainty, <i>B.J. West (U.S.A.)</i>	169
Some simulation results as to weakly correlated processes, <i>J. vom Scheidt and B. Fellenberg (German Dem. Rep.)</i>	191
The distribution of products, quotients and powers of two dependent <i>H</i> -function variates, <i>S.D. Kellogg and J.W. Barnes (U.S.A.)</i>	209
On sample solutions of random initial value and Nicoletti boundary value problems, <i>G.S. Ladde and S. Seikkala (U.S.A. / Finland)</i>	223
On the continuous approximation of the probability density and of the entropy functions for nonlinear stochastic dynamical systems, <i>I. Bonzani, M.G. Zavattaro and N. Bellomo (Italy)</i>	233
Monte Carlo-type simulation for solving stochastic ordinary differential equations, <i>R. Spigler (Italy)</i>	243
Simulation studies on time discrete diffusion approximations, <i>H. Liske and E. Platen (German Dem. Rep.)</i>	253
On the synthesis of optimal control for the continuous-time linear stochastic systems with singular mean-square performance index, <i>A.P. Serebrovski (U.S.S.R.)</i>	261
Nonlinear oscillations in physical systems, <i>G. Adomian (U.S.A.)</i>	275
On the wave propagation in unbounded random media, <i>E. Gabetta (Italy)</i>	285
Stochastic models for forecasting, <i>C.P. Tsokos and A.D. Liles (U.S.A.)</i>	291
The space transformation in the simulation of multidimensional random fields, <i>G. Christakos (U.S.A.)</i>	313

Book Reviews, <i>W.F. Ames and C. Brezinski (U.S.A./France)</i>	321
News of IMACS	327
Numerical calculation of electromagnetic forces, <i>F. Goby and A. Razek (France)</i>	343
Vibration in offshore structures – Part II, <i>G. Adomian (U.S.A.)</i>	351
Modelling and simulation of electrically stimulated nerve and muscle fibers: A review, <i>F. Rattay (Austria)</i>	357
On a Petrov–Galerkin method for the electrical and thermal behaviour of semiconductor devices in two dimensions, <i>J.J.H. Miller (Ireland)</i>	367
A mathematical framework for modular simulation, <i>B. Day, P. Fitt, P. Kimber and D. Richardson (United Kingdom)</i>	373
A model of the controller responses of the human temperature regulating system to changes in water temperature, <i>M. Neghabat, J.L. Ringuest and T.R. Gullledge, Jr. (U.S.A.)</i>	385
Two-fluid modelling of phase redistribution by obstructions, <i>M.B. Carver and M. Salcudean (Canada)</i>	399
A method for the numerical integration of mechanical systems with unilateral constraints: Study of impact in multibody systems, <i>V. Drenovac (Yugoslavia)</i>	413
Hybrid simulation of electrical machines in combination with power electronics, <i>W.J. Eijsenga (Netherlands)</i>	421
Book Reviews, <i>W.F. Ames and C. Brezinski (U.S.A./France)</i>	445
News of IMACS	455
A three-dimensional analysis program for MOS devices and the virtual node method, <i>C. Datong, W. Zeyi, W. Qiming and L. Zhijian (China)</i>	461
An application of rationalized Haar functions to the solution of delay-differential systems, <i>M. Ohkita (Japan)</i>	477
Convergence of difference approximations of nonlinear evolution equations, <i>S. Oharu (Japan)</i>	493
Transonic flow calculations using approximate potential and Euler equations, <i>Y.C.-J. Sedin, U.G. Nävert and A. Ålund (Sweden)</i>	503
Parallel Gaussian elimination on an optically interconnected data flow computer, <i>I. Nelken and D. Oxley (U.S.A.)</i>	515
Book Reviews, <i>W.F. Ames and C. Brezinski (U.S.A./France)</i>	531
News of IMACS	537
Author Index	549
Contents Volume 29	553

